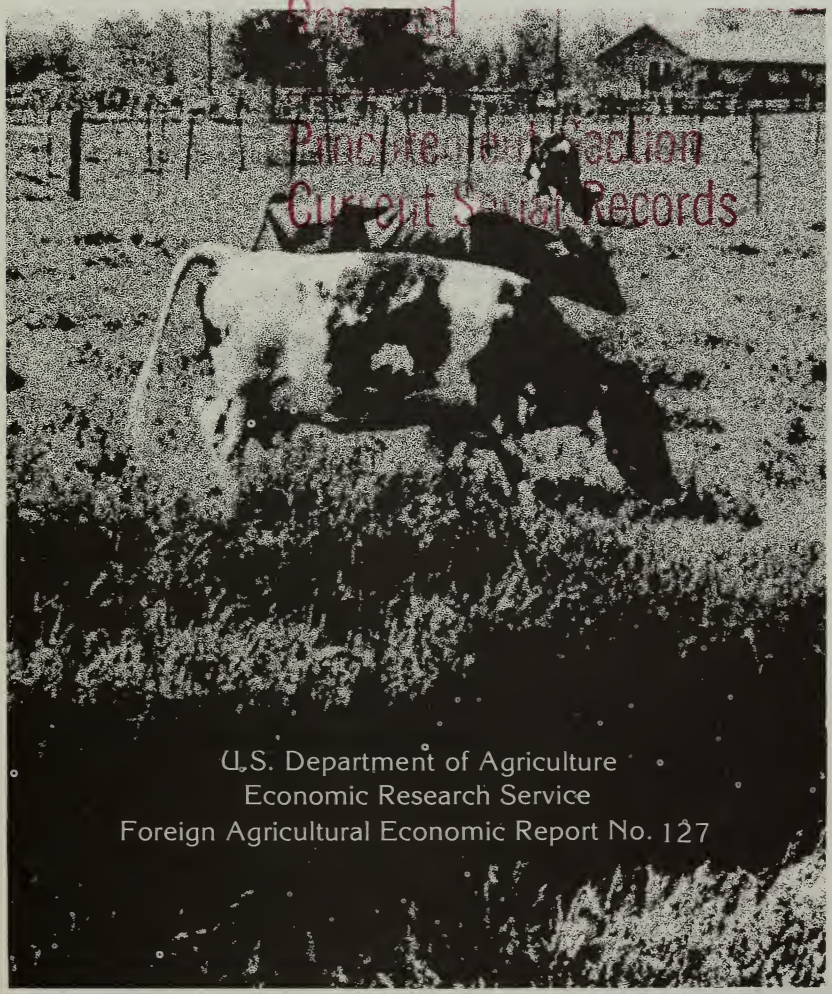
CANADIAN DAIRY POLICY

Carol E. Bray



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ABSTRACT

The Canadian dairy sector operates under a stabilization program of price supports, market quotas, and export subsidies. The stated objectives of the Canadian dairy policy are to provide producers of manufacturing milk with equitable returns for their production and to provide consumers with a steady and adequate supply of dairy products. Canada and the United States bilaterally trade dairy products, most of which are nonfat dry milk and cheese.

Keywords: Canada, dairy production and marketing, dairy policy, milk, agricultural policy, quotas, trade, and levy.

FOREWORD

This study describes and analyzes recent developments in Canadian dairy policy, and is partly a byproduct of an earlier study by the Economic Research Service entitled *The Impact of Dairy Imports on the U.S. Dairy Industry*, Agricultural Economic Report No. 282, Jan. 1975.

Developments in Canadian dairy policy are of interest to the United States because of bilateral trade in dairy products, U.S. exports of animal feed to Canada, and the role of Canada in international trade in dairy products.

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Exchange Rates

Year	*Canadian dollars per U.S. dollar*
1960	.9695
1961	1.0131
1962	1.0701
1963	1.0811
1964	1.0811
1965	1.0811
1966	1.0811
1967	1.0811
1968	1.0811
1969	1.0811
1970	1.0475
1971	1.0098
1972	.9908
1973	1.0002
1974	.9779
1975	1.0172

SUMMARY

The objectives of the Canadian dairy policy are to provide producers of manufacturing milk with equitable returns for their production and to provide consumers with a steady and adequate supply of dairy products. These objectives are implemented through the dairy program's price mechanism, market quota system, and trade policy. The Canadian Dairy Commission purchases butter and nonfat dry milk (NFDM) at established support prices and administers the direct subsidy which manufacturing milk producers receive on milk sold. The dairy product support prices and the direct subsidy are integral aspects of the Canadian dairy program's price mechanism. The marketing of manufacturing milk is regulated under the Comprehensive Milk Marketing Plan through market share quotas (MSQ). The MSQ's are administered by Provincial Government agencies or marketing boards on behalf of the Provincial Governments. In recent years, the MSQ system has undergone a series of evolutionary changes in an effort to achieve a balance between the amount of milk produced and the amount of domestic consumption at the established support price.

The export market is a major outlet for dairy products bought by the Canadian Government under the dairy price-support program. Exports of dairy products are subsidized through the export equalization fund made up of levies assessed on the market price received by manufacturing milk producers. Canada exports nonfat dry milk and Cheddar cheese and imports butter and Gruyere, Camembert, provolone, and Gouda cheese. Canada was predominantly a net importer of dairy products from the United States during 1965-75, except for 1973 and 1974, when U.S. quotas on imported dairy products were temporarily expanded and Canadian dairy exports to the United States increased substantially.

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INTRODUCTION

Various aspects of the Canadian dairy policy are reviewed in order to understand how the policy operates. Conclusions are drawn, on the basis of that understanding, about the effects this policy has upon Canada's competitive trade position in dairy products.

Although the fluid milk (milk for fresh consumption) sector is discussed, attention centers on the policy instruments related to the manufacturing milk (industrial milk) sector. The study focuses on the operation of the manufacturing milk price mechanism, quota system, and trade policy since 1970, when the Comprehensive Milk Marketing Plan was first introduced.

Also discussed is the distribution of jurisdiction over the dairy sector among the agencies that are responsible for dairy policy on the Federal and Provincial levels.

This study should be useful in understanding how changes in Canadian dairy policy may affect the Canadian supply of and trade in dairy products. Such changes are of interest because Canada is predominantly an importer of U.S. dairy products, and eastern Canada, which is the center of Canadian dairy production, imports feed from the United States.

CHARACTERISTICS OF THE DAIRY SECTOR

Canada's dairy industry is concentrated in southern Quebec and Ontario. In 1975, these Provinces accounted for 65 percent of the milk produced for fluid purposes and for 80 percent of the milk produced for industrial purposes (tables 1 and 2). Canadian milk production is highly seasonal: 70 percent of total production occurs between April and October and only 30 percent occurs between November-March (*3*).[1]

In 1975, 62 percent of the whole milk produced in Canada was used for manufacturing purposes, including creamery butter, factory cheese, concentrated milk products, and ice cream mix. Fluid sales accounted for 31 percent of total whole milk utilization. The remaining 7 percent of whole milk produced was consumed on farms. There has been a gradual shift in the pattern of whole milk utilization since 1960. At that time, 62 percent of whole milk production was used for manufacturing purposes, 28 percent was used for fluid sales, and

[1] Italicized numbers in parentheses refer to references listed at the end of the report.

Table 1—Milk production for industrial purposes by Province, 1965-75

Year	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada[1]
	1,000 pounds									
1965	183	112	160	4,183	4,412	567	541	1,043	300	11,500
1966	177	114	144	4,561	4,245	504	477	1,023	322	11,566
1967	170	109	132	4,741	4,114	475	413	984	321	11,459
1968	162	97	119	4,986	4,113	485	405	972	358	11,700
1969	171	114	126	4,481	4,087	489	408	909	330	12,116
1970	162	118	113	5,220	3,872	468	426	920	339	11,637
1971	155	110	98	5,073	3,590	441	392	866	347	11,071
1972	152	115	93	4,977	3,827	473	363	840	332	11,171
1973	138	102	81	4,619	3,408	462	323	810	315	10,259
1974	133	92	71	4,714	3,432	421	252	694	312	10,121
1975	155	98	81	5,150	3,750	445	259	755	367	11,058

[1] Sum of the columns may not add to total due to rounding.

Sources: Statistics Canada, *Dairy Statistics*, and *Canada Yearbook*, various annual issues.

Table 2—Milk production for fluid purposes by Province, 1965-75

Year	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada[1]
	1,000 pounds									
1965	22	198	157	1,455	2,075	250	195	361	493	5,206
1966	22	200	159	1,464	2,097	248	197	359	511	5,256
1967	20	203	151	1,427	2,081	245	197	351	527	5,201
1968	19	202	143	1,359	2,094	241	194	356	522	5,129
1969	18	200	136	1,312	2,103	234	189	366	530	5,088
1970	19	203	133	1,346	2,126	237	186	387	563	5,200
1971	20	211	136	1,360	2,144	240	189	395	580	5,275
1972	22	216	138	1,353	2,209	249	196	409	603	5,394
1973	24	217	138	1,392	2,240	263	195	420	626	5,516
1974	25	223	141	1,415	2,261	260	195	435	658	5,612
1975	25	224	140	1,367	2,216	256	189	438	661	5,515

[1] Sum of the columns may not add to total due to rounding.

Sources: Statistics Canada, *Dairy Statistics* and *Canada Yearbook*, various annual issues.

10 percent was used on farms. Cheese accounted for a smaller proportion of milk use in 1960 than in 1975, while a greater proportion of milk was used in the production of butter (table 3).

Table 3—Percentage of utilization of whole milk production, 1960-75

Year	Fluid sales	Manufacturing				Farm use	Total
		Creamery butter	Factory cheese	Other	Subtotal		
	Percent						
1960	28	42	8	12	62	10	100
1961	27	45	8	10	63	10	100
1962	27	46	8	9	63	10	100
1963	27	45	9	9	63	10	100
1964	28	44	10	9	63	9	100
1965	29	43	11	8	62	9	100
1966	29	43	12	8	63	8	100
1967	28	42	12	9	63	9	100
1968	28	43	12	8	63	9	100
1969	28	44	13	8	65	7	100
1970	29	43	13	8	64	7	100
1971	30	38	16	9	63	7	100
1972	31	38	16	9	63	6	100
1973	33	35	16	9	60	7	100
1974	34	33	18	9	60	6	100
1975	31	37	17	8	62	7	100

Sources: Statistics Canada, *Quarterly Bulletin of Agricultural Statistics* and *Dairy Statistics*, various annual issues.

Dairy farming is one of the largest single sources of gross income from agricultural production in Canada. Gross farm receipts from milk production totaled $1.6 billion in 1975 and accounted for 14 to 18 percent of gross farm income from 1960 through 1975.[2] Gross farm receipts ranged from 13 to 27 percent for wheat production and from 18 to 23 percent for cattle and calves (table 4).

The total number of dairy cows in Canada has been declining since 1960 (table 5). Despite the decline, a steady increase in the average yield per cow resulted in increases in milk production during 1960-69. Total milk production reached record highs during the sixties, peaking at 18.7 billion pounds in 1969. During 1970-75, increases in average yield did not offset the reduction in cow numbers; milk production declined, dropping to 16.8 billion pounds in 1974, the lowest level of production since 1954.

During the past 15 years, there has been a movement toward larger dairy farms. Farms with 18 or more cows accounted for 15 percent of total dairy

[2] Canadian dollars are used throughout this report. See the exchange rates tabulation on page i.

Table 4—Gross farm receipts, 1960-75

Year	Wheat[1]	Cattle and calves	Hogs	Dairy products[2]	Poultry	Other grains[1] [3]	Oilseeds	Other	Total
	Million dollars								
1960	513.3	545.8	266.8	486.5	135.5	116.2	67.4	680.2	2,811.7
1961	606.7	602.9	303.3	495.9	144.2	133.6	79.9	577.2	2,923.7
1962	678.4	669.0	314.1	499.6	153.8	133.7	75.5	658.1	3,182.2
1963	721.7	632.1	307.6	509.8	169.7	135.6	67.7	670.5	3,214.6
1964	938.2	646.5	319.9	533.9	176.9	158.1	104.0	626.6	3,504.1
1965	930.8	790.0	368.4	576.3	196.9	169.7	92.4	706.6	3,831.1
1966	1,003.8	913.2	416.1	652.7	232.8	193.0	128.0	774.0	4,313.6
1967	1,036.2	918.1	413.5	727.6	224.3	203.3	110.8	768.0	4,401.8
1968	920.6	958.0	408.3	753.9	230.0	184.7	82.2	839.7	4,377.4
1969	537.0	967.2	456.1	764.0	252.6	167.4	127.1	971.3	4,242.7
1970	576.7	976.0	484.5	745.5	262.7	223.4	180.2	801.9	4,250.9
1971	721.6	1,060.0	428.7	806.0	262.6	312.4	219.4	753.5	4,564.2
1972	947.5	1,205.0	570.5	880.0	295.9	325.8	246.4	982.7	5,453.8
1973	1,201.3	1,480.0	825.5	980.5	437.9	497.4	416.4	1,000.9	6,839.9
1974	2,033.2	1,680.6	787.7	1,308.8	472.2	785.2	551.6	1,247.3	8,866.6
1975	2,463.0	1,778.0	894.3	1,609.0	415.8	920.7	379.4	1,330.1	9,790.3

[1] Payments by the Canadian Wheat Board or the Ontario Wheat Producers Marketing Board direct to producers are included in the year in which they were received even though some may be for crops delivered in previous years. [2] Includes subsidy payments. [3] Oats, barley, rye, and corn.

Source: Statistics Canada, *Farm Cash Receipts*, various issues.

Table 5—Number of dairy cows, average yield, and total milk production. Canada, 1960-75

Year	Number of cows as of June 1	Average yield per cow	Total milk production
	1,000 head	*Pounds*	*Million pounds*
1960	2,964	5,987	17,746
1961	2,986	6,142	18,339
1962	2,928	6,257	18,382
1963	2,873	6,416	18,432
1964	2,845	6,504	18,505
1965	2,795	6,569	18,360
1966	2,673	6,876	18,380
1967	2,569	7,088	18,208
1968	2,489	7,377	18,362
1969	2,442	7,662	18,711
1970	2,389	7,545	18,025
1971	2,255	7,747	17,469
1972	2,170	8,146	17,676
1973	2,117	7,976	16,885
1974	2,080	8,083	16,812
1975	[1] 2,133	8,286	17,675

[1] As of July 1.

Sources: Dominion Bureau of Statistics, *Handbook of Agricultural Statistics, Part VII—Dairy Statistics, 1920-68;*
Statistics Canada, *Livestock and Animal Products Statistics*, 1974; and
Statistics Canada, *Dairy Statistics*, various annual issues.

farms in 1961, 24 percent in 1966, and 35 percent in 1971. The number of farms with dairy cows fell from 309,000 in the 1961 census to 222,000 in the 1966 census, and to 145,000 in the 1971 census.

About 90 percent of fluid milk producers received more than one-half of their gross farm cash receipts from the sale of milk. About two-thirds of manufacturing milk producers received more than one-half of their cash receipts from milk production (*10*).

A study by White and Heighton determined that as of 1966 modern dairy practices had not been adopted by the majority of Canadian dairy farmers (*17*). Less than one-third of the respondents in the study reported using a milking machine and a mechanical cooler or bulk tank. Only 3 percent of manufacturing milk producers were using pipeline milking systems and the adoption of bulk tanks was quite low.

A followup study made in 1971 determined that adoption of modern dairy practices had increased only moderately (*11*). The largest increase occurred in the use of bulk tanks. The proportion of producers using milking machines increased substantially in the Maritime Provinces (Prince Edward Island, Nova Scotia, and New Brunswick), Quebec, and Manitoba between 1966 and 1971. Increases in the proportion of producers using pipeline milkers was slight in all Provinces.

As milk production rose during the sixties, domestic consumption of dairy products declined. In addition, consumers' preferences shifted from whole to partly skimmed milk. This change in the consumption pattern coincided with changes in production from farm-separated cream to manufacturing milk. Sales of milk solids increased and consequently there was a higher output of NFDM. Also during the sixties, the combination of changes in consumption and production patterns resulted in accumulated stocks of butter and NFDM, which eventually were mostly exported (*6*). Butter exports in 1964 reached an alltime high of 114 million pounds.

During the latter half of the sixties, the major concern of Canadian dairy policymakers was reduction of output. This resulted in the gradual introduction of a supply-management program for milk production. During 1970-74, milk production declined. The butter situation changed from surplus to deficit; butter production dropped to 291 million pounds in 1972, the lowest level in over 10 years. Butter imports rose to a high of 63 million pounds in 1973, when incentives to increase production were being incorporated into the dairy supply-management program.

FEDERAL AND PROVINCIAL GOVERNMENTS

The Federal and Provincial Governments are heavily involved in the development and administration of a Canadian dairy policy. Provincial Governments have jurisdiction over the marketing of agricultural products within their territories. The Federal Government jurisdiction covers interprovincial and international trade (*8*).

In Canada, the markets for manufacturing and fluid milk are autonomous—the market for manufacturing milk and cream is mainly supplied by producers whose output is destined solely for that market, and the market for fluid milk is supplied by a different group of producers (*9*). A degree of crossover between these two markets occurs, however, when fluid milk produced in excess of the fluid milk quotas is diverted to manufacturing use. Fluid milk is bulky, perishable, and difficult to transport over long distances. Consequently, fluid markets generally have been confined to Provinces where the milk is produced. Fluid milk production and marketing are administered by Provincial authorities who set prices, establish quality standards, and assure compliance with sanitation regulations (*7*). Manufactured milk production and marketing fall primarily under the auspices of the Federal Government because manufactured milk products are traded interprovincially and internationally due to their storability and transportability.

Development and administration of the national dairy policy is carried out by the Canadian Dairy Commission (CDC) on behalf of the Federal Government. The CDC, a Crown Corporation responsible to the Minister of Agriculture, was established under the Dairy Commission Act and became operational in 1967.[3] The main objectives of the CDC are to provide the following:

(1) Efficient producers of manufacturing milk and cream with a fair return

[3] A Crown Corporation is a semiautonomous Government organization used to administer and manage public services in which business enterprise and public accountability are combined.

for their labor and capital investment, and

(2) Consumers of dairy products with a continuous and adequate supply of dairy products of high quality (*6*).

The CDC handles the first policy objective through the administration of its price policies. The CDC is empowered to purchase NFDM, butter, or cheese at established support prices, and thus to determine the minimum price level at which processors pay producers for milk. This is explained in the section on the price mechanism.

The CDC deals with the second policy objective through its administration of the Comprehensive Milk Marketing Plan, which is developed and managed by the Milk Supply Management Committee. This committee, chaired by a member of the CDC, consists of representatives from each Province, some representing the Provincial Government, and others representing the Provincial producer marketing boards. Additional representatives are from the CDC. The Comprehensive Milk Marketing Plan is discussed in the section on the production quota.

Several other Federal agencies are also involved with the dairy sector. Agriculture Canada is responsible for grading, inspection, policy, and general research. The Department of Industry, Trade, and Commerce consults with the CDC on trade.

Implementation and administration of the national dairy policy, developed by the CDC, is carried out at the Provincial level by producer marketing agencies operating under Provincial authority, or by Provincial Government agencies. These agencies establish individual market share quotas (MSQ) and provide for the orderly transfer of these quotas in accordance with policies established by the Canadian Milk Supply Management Committee (see the section on the market quota system). The Provincial marketing agencies also collect levies from producers' market payments which are then remitted to the CDC for support of Canadian milk product exports (see the section on the export equalization fund).

Although the CDC establishes the margin of return that milk processors are expected to receive from the price support system, the actual amount received by the processor is fixed in the Provinces by the Provincial milk marketing agencies through negotiations between processors and producers (see below).

MECHANISMS FOR IMPLEMENTING DAIRY POLICY

Industrial Milk

The basic instruments used to affect Government policy for industrial milk are the price mechanism, the market quota system, and the trade policy.

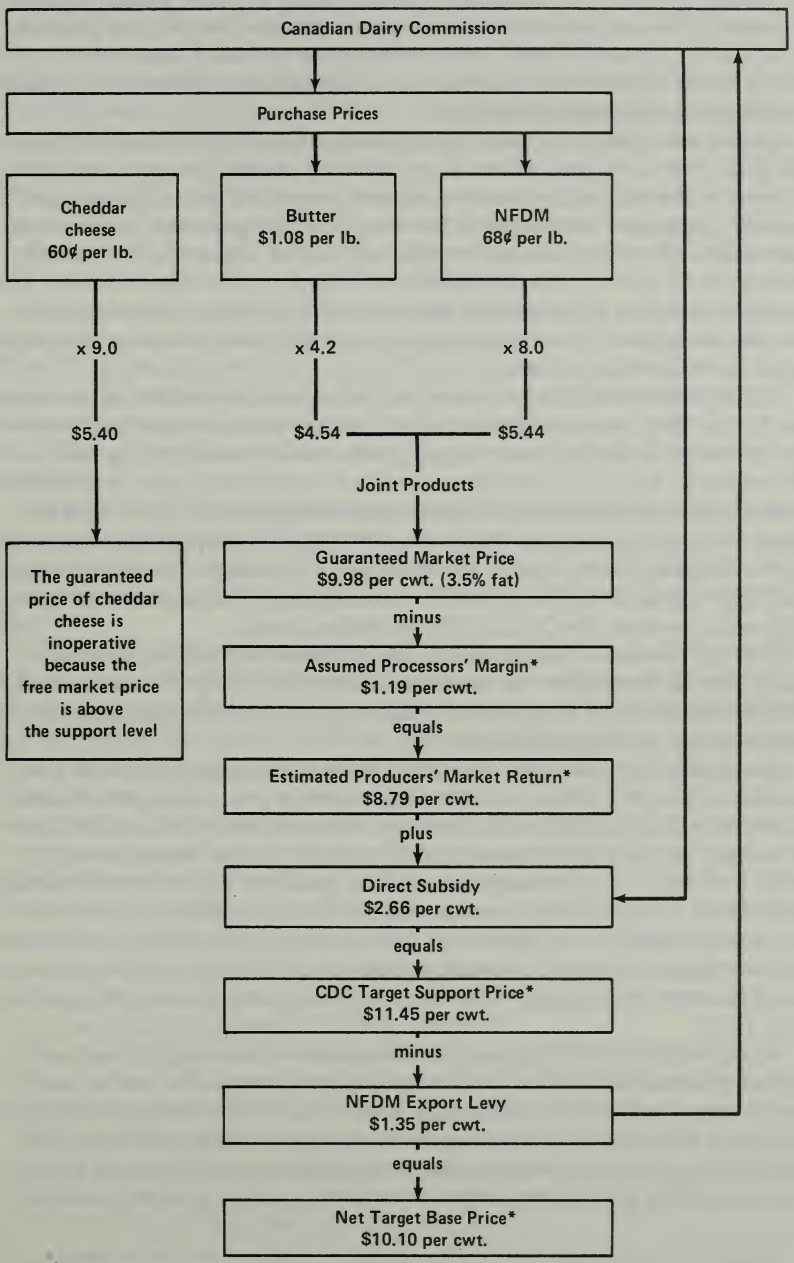
Price Mechanism

The structure of the CDC's pricing system is illustrated in figure 1. The prices indicated are those that the Government expects processors and producers to receive for the 1976 dairy year (Apr. 1, 1976, to Mar. 31, 1977).

The CDC stabilizes the market for dairy products and, indirectly, the return to producers from that market through its purchase prices. Commodities

FIGURE 1

Canadian Industrial Milk Price Support System, April 1, 1976



*The processors' margin can vary, thus the producers' return is not directly guaranteed and can also vary.

Source: Adapted from Dairy Farmers of Canada, *Facts and Figures at a Glance,* Ottawa, Ontario, 1975.

included are Cheddar cheese, butter, and NFDM. For example, butter purchases by the Agricultural Stabilization Board, prior to the establishment of the CDC and by the CDC since 1967, averaged one-fourth of annual production during 1962-72 (*6*). Purchases of NFDM during the same period averaged 43 percent of annual production. Since some manufacturers of dairy products do not have a guaranteed price and must compete for milk against other manufacturers with a guaranteed price, the guaranteed prices in effect become minimum prices for all industrial milk (*6*).

Product conversion coefficients are applied in figure 1 to convert the support prices for dairy products to the guaranteed market price per hundredweight of whole milk equivalent. An assumed processors' margin is subtracted from this guaranteed market price. The amount of the guaranteed market price that remains after the processors' margin is deducted is passed on to the milk producer in the form of the price which processors pay for industrial milk. This amount constitutes the estimated producers market return. Thus, all of the Government support price for dairy products, except the processors' margin, is passed on to the milk producer.

Although the returns for processors and producers are outlined at the national level by the CDC, the actual amount which the processors receive, and consequently the price which processors pay producers for manufacturing milk, is determined by Provincial authorities, usually in negotiations between producer marketing boards and processors. If the marketing boards and processors are unable to agree on a price for the processors' margin, an appeal can be made to the Provincial regulatory agency for a decision. For example, in Ontario, processors can appeal to the Ontario Milk Commission, a Provincial Government body which oversees the Ontario Milk Marketing Board.

Since the processors' margin varies from Province to Province, being somewhat higher in areas where the volume of milk supplied to processors is small and unstable, the price paid to some producers may be lower than the level established by the Federal Government.

In addition to returns from the market for manufacturing milk, milk producers also receive a direct subsidy, based on their production performance under their MSQ, which is mailed directly to them monthly by the CDC (see the section on the market quota system) (*8*). This direct Federal subsidy, which is $2.66 per hundredweight on all milk produced within the MSQ during the 1976/77 dairy year, represents a return to the milk producer direct from the Federal Treasury. The Minister of Agriculture has indicated, however, that the Government intends to eventually phaseout the subsidy, and that the producers' income in the future will be supported only through the CDC purchase prices (*15*).

During the 1975/76 dairy year, the Government allocated $275 million for support of industrial milk. Of this amount, $9 million was allocated to cover storage costs, interest on the Treasury Board Loan, and marketing charges, other than losses due to the difference between the world market and the domestic support price. The remaining $266 million was allocated for direct support at $2.66 per hundredweight on 10 billion pounds of industrial milk.[4]

[4] Starting with the September 1975 shipments, the CDC reduced the proportion of milk on which the subsidy was paid to 75 percent of the milk delivered. This was done to keep within the allotted $266 million, as it became evident that the quantity delivered

For 1976/77, the total allocation for support of dairy production has been set at $276.7 million, $24 million of which is to be used for market costs, leaving $252.7 for direct support at $2.66 per hundredweight for 95 million hundredweight of milk.

The guaranteed purchase price program, in contrast to the subsidy program, does not represent a direct payment from the Federal Treasury. The CDC maintains a borrowing capacity with the Federal Government for the purchase of Cheddar cheese, butter, and NFDM at the established purchase prices. This loan is repaid by the resale of the product either in the domestic market, as is generally the case with butter, or in the world market, as is the case with NFDM. If the price which the CDC receives for the export of milk products is below the amount paid at the support price, the difference is made up by the milk producers in the form of a levy deducted from the market price for industrial milk (see the section on the export equalization fund).

The target support price is the sum of the direct subsidy and the estimated producers' market return. This target support price, which is $11.45 for 1976/77, is generally announced near the start of the dairy year (Apr. 1) and serves as a guideline to the price that the Government expects producers to receive. It is only a target support price and may not be equal to the actual price received by producers due to varying processors' margins from region to region (*3*).

On April 1, 1975, the target support price for industrial milk was indexed. The target support price adjustment formula consists of an index of cash input prices (weighted 45 percent) and the consumer price index (weighted 35 percent); the latter was used as a measure of changes in the cost of self-supplied labor.

The above formula, plus a number of judgmental factors which account for capital costs (collectively weighted 20 percent), are used to determine the target support price for the next year. These judgmental factors include significant changes in the level of domestic stocks in dairy products, changes in returns to dairy producers, and major changes in competitive processing costs. During the dairy year, the formula itself, without consideration of the judgmental factors, is designed to operate automatically (*15*). The formula is computed quarterly, and it must increase or decrease at least 4 percent during a quarter before it triggers a change in the target support price. Adjustments in the target support price can be made only after a 3-month interval has elapsed since the time of the last adjustment (*15*). According to the formula, production costs during the 1975/76 dairy year increased 3.9 percent. This resulted in a 43-cent increase in the target support price for 1976/77. The target support price rose, therefore, from $11.02 to $11.45 (*2*).

The use of judgmental factors in the formula enables the Government to maintain some control over the direction of dairy policy, if for some reason its policy goals conflict with the automatic movement of the index.

The indexation policy is expected to remain in effect for at least 5 years. This time period was instituted at the request of milk producers who felt that 5 years was the length of time required to provide stability for the implementation of producers' investment decisions (*15*).

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under the MSQ would far exceed the expected 100 million hundredweight. In December, subsidy payments were further reduced to 60 percent of all shipments within the MSQ.

Market Quota System

Production quota—The 1976/77 milk marketing quota system is the most recent stage of an evolutionary process which started in 1970 with the introduction of the Comprehensive Milk Marketing Plan. Under this plan, the CDC, on behalf of the Federal Government, as well as the Provincial Governments and Provincial milk marketing agencies, agreed to develop a program using the MSQ to manage the Canadian milk supply, and to provide a balance between domestic production and use of butterfat in manufactured products. The Canadian Milk Supply Management Committee administers the supply management program, and the Provincial marketing boards implement the Committee's policies through the allocation of quotas to individual producers. Quotas, the foundation of the marketing plan, are allocated to individual producers based on the producer's production level during the previous year.

Industrial milk producers in Ontario and Quebec were the original subscribers to the plan in 1970. Prince Edward Island joined the plan in December 1971, Alberta in April 1972, Saskatchewan and Manitoba in July 1972, British Columbia in October 1973, and New Brunswick and Nova Scotia in April 1974. Newfoundland is not a member of the plan. Its milk production, however, is negligible and does not have a significant impact on the total supply of industrial milk (*8*).

From 1970 to 1974, producers were allocated two kinds of quotas under the Comprehensive Milk Marketing Plan—the subsidy eligibility quota (SEQ) and the MSQ. The SEQ, administered by the CDC, determined the amount of milk which entitled producers to receive direct subsidies. The MSQ, administered by Provincial authorities, determined the proportion of the total market for manufacturing milk which could be supplied by a single producer. Industrial milk producers with an annual output of at least 420 hundredweights of butterfat received an individual subsidy quota and market share quota. A producer's MSQ and SEQ could be for the same amount of milk. Generally, however, the MSQ was larger than the SEQ (*7*).

The general operation of the quota system from 1970-76 is shown in figure 2. Producers received P_5Q_1 for milk produced within the SEQ, where P_5 was the market price (P_3), plus the Federal subsidy ($P_5 - P_3$), and Q_1 was the SEQ. In addition, producers received $P_2Q_2 - P_5Q_1$ for milk produced above the SEQ but still within the MSQ, where P_2 was the market price (P_3) minus a specific levy used to subsidize the export of dairy products, and Q_2 was the MSQ. (The levy was not applied to milk produced within the SEQ.)

In 1974, the CDC suspended the SEQ, and the subsidy became available on all milk produced within the MSQ. Thus, after 1974, producers operated under only one quota—the MSQ. Producers then received the market price plus a subsidy for all milk delivered under the MSQ. The price for milk delivered under the MSQ increased by the amount of the subsidy, from P_2 to P_4. It did not equal P_5, however, because of the specific levy which was deducted from the market price to support the export of dairy products.

During 1970-76, substantial levies were imposed on producers who delivered milk in excess of the MSQ as disincentives for producing above quota. The price received for above quota production of $Q_3 - Q_2$ was P_1, the market price less the above quota levy.

FIGURE 2

Quota System for Manufacturing Milk
1970-76

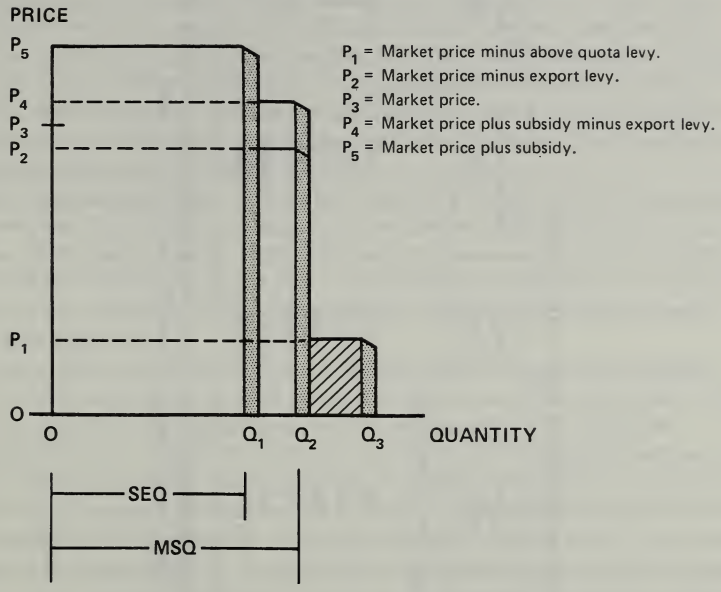

Table 6 gives the estimated prices received by producers for milk produced within the SEQ, MSQ, and above quota.

During 1970-75, the MSQ did not operate as a restraint on milk production because as Provinces entered the Comprehensive Milk Marketing Plan, they received concessions in the size of their basic quota entitlements. The quota entitlements were protected from reduction in size for 3 years. Thus, more MSQ was available in the marketing system than was necessary for domestic consumption of manufacturing milk.

In 1972, the quota level was further expanded as an additional 7.5-percent quota was distributed to all the Provinces. The expanded level was adopted to increase the amount of quota available to Quebec Province, which had exceeded its quota, but could not utilize the other Provinces' unused quotas because of the 3-year protection period.

Prior to 1975, the domestic consumption of dairy products exceeded domestic production at the stabilized support price, and Canada had to import butter to keep consumer prices down. In 1975, the target support price was increased for the sixth time since 1972. This increase, combined with the payment of subsidies on all of the MSQ, encouraged use of all the available MSQ. Production expanded 15 to 16 percent in 1975, but still remained within the total MSQ of 121 million hundredweights (*14*). Industrial milk production exceeded projected domestic requirements by 11 million hundredweights in 1975/76. On September 1, 1975, the CDC reduced the amount of the MSQ on which the subsidy would be paid to 75 percent of deliveries for the rest of the dairy year, in effect returning to the two-quota system. This was done because the CDC

Table 6—Estimated prices received by producers for manufacturing milk, 1971/72-1976/77

Dairy year[1]	Market price	Subsidy	SEQ price[2]	Export levy	MSQ price	Above quota levy	Above quota price
	Dollars per hundredweight						
1971/72	3.89	1.25	5.14	.10	3.79	2.40	1.49
1972/73	4.40	1.25	5.65	.10	4.30	1.50	2.90
1973/74	5.00	[3] 1.45	6.45	.10	5.46	1.50	3.50
1974/75	6.20	[4] 2.30	8.50	.15	8.35	1.50	4.70
1975/76	8.36	[4] 2.66	11.02	.45	10.57	4.00	4.36
1976/77	8.79	[5] 2.66	11.45	1.35	10.10	8.60	.19

[1] Estimated as of April 1 for dairy years (Apr.-Mar.). [2] Also referred to as the target support price. [3] $1.45 on all deliveries covered by the SEQ, and 56 cents on all other deliveries within the MSQ. [4] On all deliveries covered by the MSQ. [5] On 95 percent of deliveries covered by the MSQ.

Source: Statistics Canada, *The Dairy Review*, various monthly issues.

would not be able to remain within its budget with the current subsidy rate (*16*). In December 1975, the amount of the MSQ on which the subsidy would be paid was further reduced to 60 percent of all shipments (*13*).

For 1976/77, the primary objective of Canadian dairy policy is to reestablish the MSQ as an instrument of supply management. The amount of the MSQ available to the Provinces has been cutback about 17 percent, and the total MSQ is set at 100 million hundredweights, of milk. Total consumption of industrial milk for the 1976/77 dairy year is projected to be 95 million hundredweights, even though 100 million hundredweights worth of MSQ would be available. A levy of $1.35 per hundredweight is being imposed on producers for production within the MSQ (*14*).

Export equalization fund—The export market is a major outlet for domestic dairy products bought by the Canadian Government under the milk support program. If the price that the CDC sells dairy products on the world market is lower than the domestic support price, the difference between the two prices is made up by a deduction from the producer's market price on all manufacturing milk delivered.

In 1975, the world market price for NFDM fell well below the Canadian support level. Substantial increases in the levy on manufacturing milk were needed to subsidize continued exports. The levy rose from 15 cents per hundredweight to a high of 90 cents per hundredweight during the summer of 1975. In response to these increases, milk producers petitioned for the establishment of an export equalization fund. They proposed that the amount of levy contributed to the fund by industrial milk producers be based on a moving average of the required levies projected over the future 5-year period. The establishment of an export equalization fund was announced by the CDC on October 2, 1975. The fund, which is made up of funds received from the specific levy assessed on producers for the export of dairy products, is administered by the CDC and backed by the Federal Government. The levy rate was lowered to 65 cents, and it was stipulated that the rate would be adjusted annually to assure that neither a surplus nor a deficit of more than $40 million would develop. If the difference between the world price and the support price is not met through the amount of the levy, the CDC can borrow from the Government to cover the deficit. If the fund is in surplus, the loan is repaid. Interest is charged on the loan from the Government and paid on any surplus in the account (*12*).

Fluid Milk

Fluid milk producers are located throughout Canada in direct relation to the population distribution. The number of fluid milk producers in Canada has remained fairly stable over the years. Fluid producers leaving the industry are immediately replaced by producers from the manufacturing milk sector (*3*).

Fluid milk producers generally have larger herds, receive higher net returns, produce under daily quotas, and face stiffer sanitation standards than do industrial milk producers.

The fluid sector is primarily under the control of Provincial marketing boards or commissions which determine producer prices, production quotas, and sanitation standards. Although specific procedures may vary from Province

to Province, producer prices are generally determined through either parity formulas or public hearings, or both (*8*).

Quotas for the fluid market are determined by the projected requirements of the market area. After the total quota for the area is determined, quotas are allocated to individual producers by Provincial authorities. Fluid milk quotas are daily quotas designed to eliminate seasonality of fluid milk production and to assure a steady year-round supply of fresh milk for direct consumption (*3*).

Milk produced in excess of the fluid quota is diverted to the industrial sector, where it comes under the Federal MSQ system. The price received for excess fluid milk is lower than the fluid price and is usually closely related to the industrial milk price (*8*). Fluid producers maintain MSQ's for manufacturing milk in addition to their fluid milk quotas. They also receive a subsidy on the milk delivered under their MSQ.

Future Developments

Canadian dairy policy is continuing its evolutionary process as policy changes are introduced to deal with problems in the dairy sector as they develop. When the Canadian Minister of Agriculture announced the 1976/77 dairy program, he indicated that arrangements should be made to achieve complete integration of the industrial and fluid milk sectors. "Producers would receive equal returns for equal quality, whether the milk is used for manufacturing or fluid sales" (*15*).

The extent that this integration will apply to industrial and fluid milk quotas is undefined. It would at least increase the number of producers from whom the levy could be collected.

A system under which producers were paid on the basis of milk quality rather than end use would remove some of the barriers that presently exist for manufacturing milk producers entering the fluid sector. Any producer who can achieve quality standards for fluid milk would have access to the prices received for fluid milk, which are presently higher than those for manufacturing milk.

TRADE

Dairy Products

Exports

Canada exports Cheddar cheese, NFDM, evaporated milk, and small quantities of butter. Total exports of dairy products in 1975 equaled $36 million. The NFDM and cheese averaged 91 percent of the total value of dairy exports in 1965-75. Cheese averaged 27 percent of the total value of dairy exports during that period, while NFDM averaged 64 percent. Since 1970, NFDM has accounted for an increasing proportion of dairy exports, both in quantity and value, but the proportion of total dairy exports made up of cheese has been declining (table 7).

During 1965-72, an average of 81 percent of the value of cheese exports and 30 percent of the total value of dairy exports went to the United Kingdom.

Table 7—Exports of dairy products from Canada, 1965-75

Year	Butter		Cheese		NFDM		Evaporated milk		Other	Total dairy
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value		
	1,000 pounds	*1,000 dollars*	*1,000 pounds*	*1,000 dollars*	*1,000 pounds*	*1,000 dollars*	*1,000 pounds*		*1,000 dollars*	
1965	2,929	1,076	32,055	11,798	86,258	12,917	6,654	916	13,842	40,549
1966	160	99	35,948	14,173	69,447	10,742	8,499	1,185	4,571	30,770
1967	54	36	27,634	11,207	94,973	15,539	7,290	992	3,184	30,958
1968	5	4	44,262	16,281	126,688	11,747	7,180	948	1,516	30,496
1969	3	2	35,957	14,164	238,300	17,606	6,802	958	1,402	34,132
1970	6	4	39,433	16,187	297,154	29,095	11,873	1,620	2,001	48,907
1971	4,473	1,996	32,813	18,333	240,396	40,387	3,574	462	886	62,064
1972	22	16	21,024	14,561	114,507	30,888	2,429	353	1,434	47,252
1973	5	4	11,851	8,469	267,633	77,854	307	63	1,608	87,998
1974	9	8	8,306	6,953	129,173	55,358	65	19	2,656	64,994
1975	50	56	4,876	5,118	80,163	28,865	79	20	2,216	36,275

Source: Statistics Canada, *Trade of Canada, Exports by Commodities*, various monthly issues.

After Britain's entrance into the European Community (EC), sales of dairy products to the United Kingdom dropped from $11 million in 1972 to $2 million in 1973, reaching a low of $207,000 in 1974.

Cheese exports dropped 42 percent in value between 1972 and 1973. This decrease in cheese exports, combined with substantial temporary increases in the volume of all cheese that could be imported by the United States under U.S. cheese quotas during 1973-74, meant that the proportion of Canadian cheese exports to the United States increased to 92 percent by 1974. U.S. imports of Canadian cheese had averaged 10 percent of total Canadian cheese exports in 1965-72. The United States became the primary importer of Canadian cheese for the 2-year period.

Canadian exports of NFDM increased steadily in value from 1965-73, peaking at $77.9 million in 1973. Exports of NFDM to the EC have decreased steadily from $5.9 million in 1965 to $23,000 in 1974. During 1970-75, the countries accounting for the largest proportion of NFDM exports were Mexico and Cuba. During this period, exports of NFDM to Mexico averaged 35 percent of total NFDM exports, and NFDM exports to Cuba averaged 25 percent.

During 1973-74, the United States increased the quantities of NFDM which could be imported under the U.S. quota system for dairy products. Canadian exports of NFDM to the United States increased from $203,000 in 1972 to $28 million in 1973. The latter value represented the largest sale of NFDM to any country for any year during 1965-75.

Imports

Canadian imports of dairy products totaled $56 million in 1975. The major dairy commodity imported by Canada is cheese, especially Camembert, Gouda, provolone, and Gruyere. Per capita consumption of cheese rose from 11.85 pounds in 1970 to 15.63 pounds in 1975, and total cheese consumption increased at an average annual rate of 7.1 percent. Production, however, rose only at an average annual rate of 4.7 percent. Imports of cheese increased steadily during 1965-75, rising from $10.5 million in 1965 to $47.6 million in 1975, and averaging 70 percent of the total value of dairy imports (table 8).

The EC is the predominant source of Canadian imports of cheese. Imports from the EC averaged about 50 percent of total Canadian cheese imports during 1965-75, ranging from a low of 35 percent in 1969 to a high of 62 percent in 1975. The major EC country exporting cheese to Canada was France, which maintained an average of 20 percent of total EC cheese sales, followed by the Netherlands, which averaged 25 percent, and Italy, which averaged 30 percent. Denmark averaged 17 percent of the total value of Canadian cheese imports for the period, and remained an important source of Canadian cheese imports after its entrance into the EC. Denmark maintained an average of 25 percent of the total value of Canadian cheese imports from the EC during 1973-75.

Cheese imports from the United States steadily increased during 1965-75. The U.S. share of the Canadian market, however, decreased from 15 percent during 1965-70 to 10 percent in 1975.

Butter is imported by the CDC to stabilize domestic prices. Consequently, butter imports fluctuated considerably in response to domestic supply conditions—

Table 8—Imports of dairy products to Canada, 1965-75

Year	Butter		Cheese		NFDM		Evaporated milk		Other	Total dairy
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value		
	1,000 pounds	*1,000 dollars*	*1,000 pounds*	*1,000 dollars*	*1,000 pounds*	*1,000 dollars*	*1,000 pounds*		*1,000 dollars*	
1965	1,401	441	17,652	10,559	7,648	1,294	4,066	60	408	12,762
1966	23,412	6,710	18,247	11,131	2,720	527	12,014	138	436	18,942
1967	9,569	2,512	23,664	14,025	7,179	1,258	9,807	112	826	18,733
1968	16	5	26,970	15,439	8,111	1,360	8,640	100	417	17,321
1969	3,360	919	31,269	16,877	7,605	1,751	5,811	71	484	20,102
1970	1,938	449	30,641	18,182	7,745	1,574	7,680	137	474	20,815
1971	3,084	1,621	34,612	20,970	3,552	689	12,239	142	506	23,928
1972	8,951	4,701	37,510	25,918	4,009	827	17,054	159	523	32,128
1973	62,635	31,446	43,195	30,291	4,305	977	6,236	222	658	63,594
1974	53,766	31,237	48,762	41,375	3,818	1,166	14,490	711	848	75,337
1975	10,064	5,897	48,681	47,561	3,521	1,270	19,820	429	853	56,010

Source: Statistics Canada, *Trade of Canada, Imports by Commodities*, various monthly issues.

from virtually no imports of butter in 1968 to 49 percent of the total value of dairy products imported in 1973. During 1965-68, butter imports from the EC averaged 89 percent of total Canadian butter imports. The major EC sources for these imports were France, Belgium-Luxembourg, and the Netherlands.

During 1973-74, Canadian butter imports reached $31 million each year. Most of these imports came from Australia and New Zealand. Butter imports from these two countries equaled $23 million in 1973 and $26 million in 1974, or 73 and 85 percent of the total value of Canadian butter imports, respectively.

Policy

Import Policy

Imports of dairy products are controlled by the Export and Import Permits Act of 1954, as amended.[5] Under this act, a product may be placed on the import control list if any action is taken to support its domestic price. No commodities on the control list may be imported without a permit from the Department of Industry, Trade, and Commerce. Therefore, dairy products associated with the CDC support program are subject to import control (*7*). In the past, butter, all cheese, dry buttermilk, dry casein and caseinates, NFDM, dry whole milk, dry whey, evaporated and condensed milks, and animal feeds containing more than 40 percent NFDM have been under import control. Butter was imported by the CDC when domestic production was low. Also, permits were issued without quantitative restrictions to private importers under an open general license system for natural cheese (other than Cheddar or Colby) for direct consumption, and imports of processed cheese and casein for industrial use (*5*).

Under the general license system, it was difficult to regulate the end use of cheeses which were imported for direct consumption but ended up eventually being used for manufacturing purposes. On June 6, 1975, a global import quota on all types of cheese was instituted in order to organize and simplify the existing cheese import system. Under the global quota, which amounted to 50 million pounds of cheese, individual import permits were required for all imports of cheese (whether natural or processed cheese) over $20.00 in shipment value. No distinction was made under the global quota as to variety, end use, or importing country of the cheese.[6] Permits are allocated to importers in proportion to the average of their imports during 1973-74, by cheese variety (*4*).

On April 18, 1975, the Canadian Minister of Agriculture stated that ". . . butter imports may be necessary from time to time, however, domestic consumption will continue to be met predominantly by Canadian production" (*15*). On November 4, 1975, the Minister of Agriculture announced that ". . . imports will be allowed to increase over the next several years to reach not less than the equivalent of 10 percent of manufactured products" (*1*). Although it has not

[5] The act was amended in 1974 to delete the termination date.

[6] Imports were permitted from any country but Rhodesia.

been specified, the 10-percent figure has been interpreted by industry sources to refer to domestic butterfat consumption. The 50-million pound global quota for cheese represents 5 percent of the domestic butterfat requirements. Therefore, it is assumed that the specified 10-percent total will be achieved by at least a 5-percent increase of cheese or butter imports on a butterfat basis (*3*). Despite the indication that imports of dairy products would probably be allowed to increase, the quota for cheese remained at 50 million pounds for 1976 (*2*).

Butterfat, as well as NFDM, comes from industrial milk. When production of butterfat is sufficient to meet domestic needs, the corresponding level of NFDM produced exceeds domestic quantity demanded at present prices. During 1975, butterfat requirements equaled 392.7 million pounds. Production of butterfat equaled 357.7 million pounds; the difference between quantities supplied and demanded at the guaranteed purchase price was made up through imports. Even at the 1974 level of butterfat production, when Canadian butterfat consumption was not fully met by domestic butterfat production, production of NFDM exceeded domestic consumption by 175 million pounds (*3*). Because quotas are calculated on the basis of butterfat requirements, surpluses of NFDM are an inevitable consequence of the Canadian milk supply management program.

Export Policy

Exports of dairy products are supported by the levies assessed on the producers of industrial milk which are paid into the export equalization fund.

The Canadian International Development Agency (CIDA) represents another export outlet for Canadian dairy products, particularly NFDM. The origin of Canadian food aid is a policy of surplus disposal, which previously involved mostly wheat. During the seventies, dairy products, particularly NFDM, have been used increasingly for food aid (*9*).

CIDA purchases NFDM at the domestic support price. The difference between the support price and the world price, which the recipient would have to pay if NFDM was purchased from another country, is absorbed by CIDA (*3*). During 1975, the value of dairy products used for food aid was $7.8 million.

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